

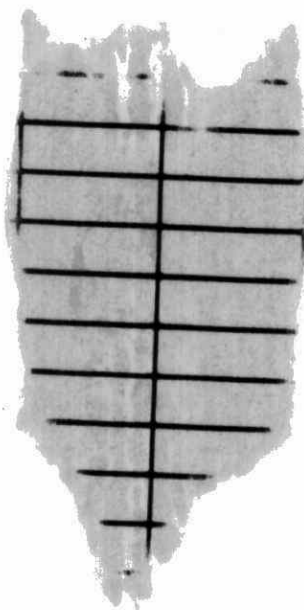
STANDARDS DEVELOPMENT BRANCH OMOE

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# INFORMATION SOURCES ON HAZARDOUS CONTAMINANTS

December, 1984

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INFORMATION SOURCES  
ON  
HAZARDOUS CONTAMINANTS

by  
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Agricultural and Industrial Chemicals Section  
Hazardous Contaminants and Standards Branch  
Ontario Ministry of the Environment

December, 1984

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## INTRODUCTION

The purpose of this guide is to introduce a person new to the area of environmental toxicology to some of the sources of information on toxic substances. It is intended to supplement more general texts (see Appendix I) by including sources relating specifically to hazardous substances. Brief comments on their usefulness in providing information on environmental aspects of chemicals are included.

The information sources included here are based on, but not limited to, resources available to the Hazardous Contaminants and Standards Branch. The list is not intended to be an extensive but a good working collection. As there may be an opportunity to update this compilation, any help in locating other sources would be appreciated.

When needing an answer to a question, the first step is to outline as specifically as possible the information that is needed. Once this is done, separate the requirements into different types; e.g.: toxicity data, physical properties, environmental fate, numerical data, literature, reviews, etc. Then consider the most likely place to obtain each of these. If the sources first approached do not yield the necessary information, check if they give you any leads, or consider other possible sources. The process of obtaining information is outlined in figure 1.

There is no hard and fast rule on which sources to access first, as this depends on what information one is looking for. Experience in the field will always make judgement easier and the first choice more likely to be correct. Frequently, more than one source will be needed to answer a query.

If a simple fact is required (hard data) then a dictionary or handbook is the first choice, followed by other reference works or books on the topic. If these are not successful, a literature search on a database can then be done. At times however, approaching an individual or organization whose mandate is to answer queries in a certain area is the best option to take.

The material in this guide has been arranged by type of source and alphabetically by title or name. A short comment is added under each to help evaluate the source for a particular use.

The divisions into which the sources of information have been grouped are described below:

(1)	<u>Dictionaries and Handbooks</u>	Page
	These are sources of factual data. Usually presented in a concise form, they have collected from various sources specific information. A few include evaluation and discussion of the information. All are intended for quick access to data, however, the access points given may not be suitable for a particular query.	4
(2)	<u>Directories</u>	12
	As guides to organizations and persons who may have the information you need, these could have been included in the section "Additional Sources". There are large numbers of directories in existence. Major libraries have large collections of them and are able to answer telephone requests for information.	
(3)	<u>Other References Works</u>	14
	There is a continuous gradation between handbooks and other reference works. Books that include a good index can always be used for reference. Only works which contain information on a variety of chemicals have been considered.	
(4)	<u>Factual Data bases</u>	19
	The sources listed here are commercially available machine readable databases which offer specific type of data on chemicals.	
(5)	<u>Bibliographic Data bases</u>	25
	Compared to the databases named in the previous section, these offer only references to works that contain the information required. The only exception is when abstracts are included. They serve as a guide to information available on a topic.	
(6)	<u>Current Awareness</u>	31
	Two types of sources have been listed here. Firstly a selected list of journals which regularly include material of interest and secondly newsletters that highlight events and findings of significance.	

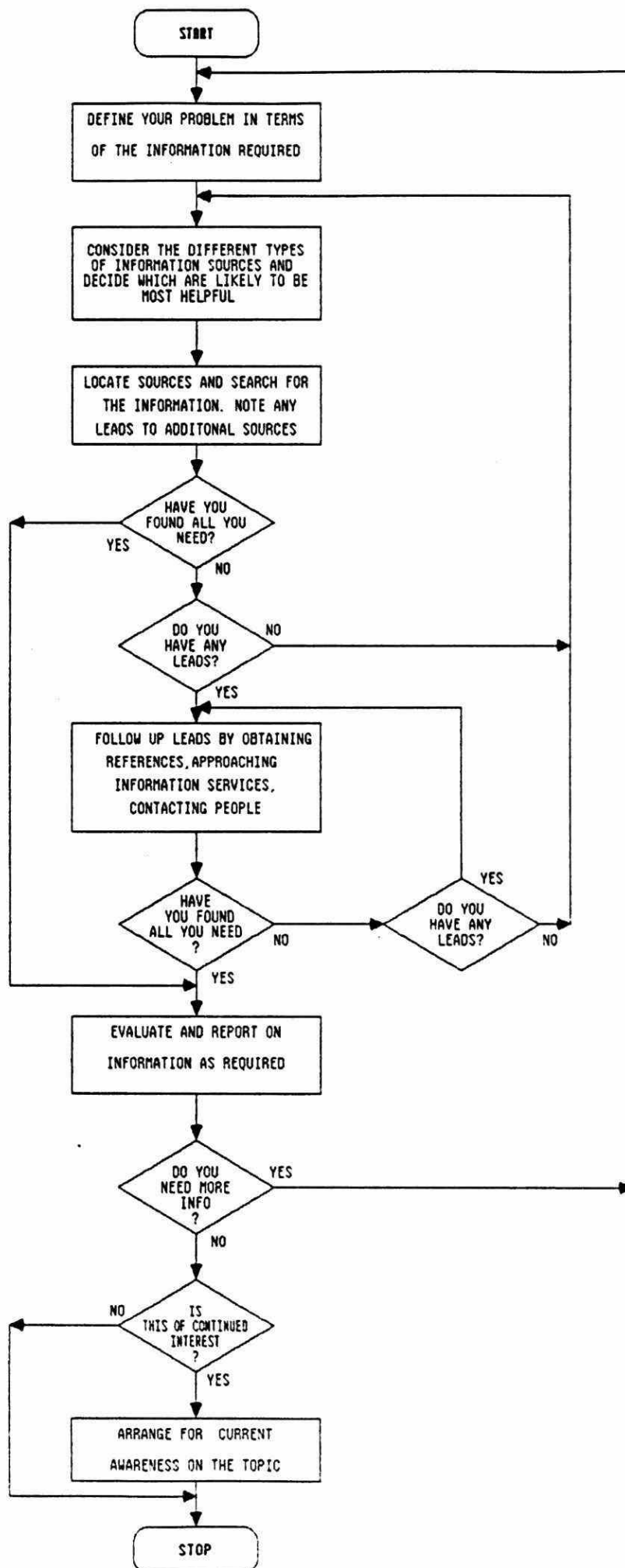
(7) Other Sources

Page

A short list of organizations that can answer queries or which regularly make information available is included. Directories are a way to get leads to additional information sources. 33

Some entries are followed by a call number. They refer to material available at the Hazardous Contaminants and Standards Branch. A Main or Lab preceding the number indicates that the reference is available at the Mail or Lab library of the Ministry of the Environment.

FIGURE 1: STEPS IN THE SEARCH FOR INFORMATION





## I DICTIONARIES AND HANDBOOKS

Agricultural Chemicals by W.T. Thomson, Thomson Publications, Fresca, California (updated periodically, various dates)  
(SB 950-95 T46)

In four volumes, is divided into insecticides, herbicides, fungicides and fumigants, growth regulators, repellants and rodenticides. Access is given by common name of active ingredient. Only brief information on toxicity, uses, applications, and precautions is included.

Blakeston's Gould Medical Dictionary, McGraw Hill, New York, 4th ed., 1979. (R 121 B62 1979)

One of the standard dictionaries in the field. It refers to only medically important chemical substances, but is useful for toxicological terminology.

CRC Handbook of Chemical Synonyms and Tradenames edited by William Gardner, et al., CRC Press, Boca Raton, Florida, 8th ed., 1978. (QD 5 G38)

Gives the chemical name and manufacturer trademarks or common name for a variety of substances. Indicates use and general characteristics.

CRC Handbook of Chemistry and Physics CRC Press, Boca Raton, Florida, (Annual) (QD 65 H3 1982)

This well known handbook is very useful for chemical and physical properties of substances.

CRC Handbook of Identified Carcinogens and Non-Carcinogens: Carcinogenicity, Mutagenicity Database edited by Jean V. Soderman, CRC Press, Boca Raton, Florida, 1982.  
(RC268.6 S63 1982)

References studies on the carcinogenicity and mutagenicity of chemicals arranged by chemical class and target organ. Includes a chemical name index.

Cancer Causing Chemicals by N. Irving Sax, Van Nostrand Reinhold, New York, 1981. (RC 268.6 S29)

Geared at a popular audience, half the text is devoted to a list of chemicals under which the results of carcinogenicity tests are given as conclusive, suggestive, or indeterminate. Included are summaries of IARC monographs.

Catalogue of Teratogenic Agents by Thomas H. Shepard, Johns Hopkins University Press, Baltimore. (QM 691 S43 1980)

Lists alphabetically over 600 substances known to cause birth defects in experimental animals. References and abstracts of the studies reporting such effects are given.

Chemical Safety Data Sheets, Fisher Scientific Co., Fairlawn, N.J., 1984. (T55 3H3 R48 1984)

For use in the workplace, these datasheets outline good working practice and general health and safety hazards.

Clinical Toxicology of Commercial Products: Acute Poisoning edited by Robert Gosselin, et al., Williams & Wilkins, Baltimore, 4th ed., 1981. (newer edition now available). (RA 1211 G5 1981)

A useful guide to toxicity of commercial products. Ingredients accessible by name and CAS registry number. The trade name section outlines the ingredients of many products. Also gives general formulation for particular types of products.

Compendium of Pest Control Products Registered in Canada by the Pesticides Division, Plant Health and Plant Products Directorate, Agriculture Canada, Ottawa (Annual). (KE 3766. P5 A35).

The 1983 edition contains the list of all pesticides registered for use in Canada effective until December 31, 1985. Access is provided by registration name, active ingredient, registrant and registration number.

The Condensed Chemical Dictionary revised by Gessner G. Hawley, Van Nostrand Reinhold, New York, 10th ed., 1981. (QD 5 C5 1981)

A useful source for concise information on chemicals and chemical processes. Gives chemical and physical properties, indication of use, hazard and safe handling. A good companion to the McGraw-Hill Dictionary.

Controversial Chemicals: A Citizen's Guide edited by P. Kruus and I.M. Valeriote, Multiscience Publications, Montreal, 1984. (RA 1229 C66 1984)

Discusses the environmental health of 30 chemicals or groups of chemicals written for the general public.

Dangerous Properties of Industrial Chemicals edited by N. Irwing Sax, Van Nostrand Reinhold, New York, 6th ed, 1984. (T 55.3H3 S3 1984)

Commonly known as Sax's, half the volume is devoted to short entries outlining the hazardous properties of commercially important chemicals. The RTECS data for the chemicals considered is included.

Emergency Response Guide for Dangerous Goods, Copp Clark Pitman, Toronto, 1982. (For Transport Canada, Transport of Dangerous Goods Branch in cooperation with Supply and Services Canada). (T 55.3H3 E64 1982)

This guide outlines in general terms action necessary by field personnel in cases of accidents. Access to the action guides is possible through United Nations product identification number or North American number, and chemical name in French or English.

1984 Emergency Response Guidebook: Guidebook for Hazardous Materials Accidents, U.S. Dept. of Transportation, Material Transportation Bureau, Washington, D.C. 1984. (T 55.3H3 U54 1984)

The DOT handbook is geared to workers in the field. It outlines the necessary procedures for dealing with chemical accidents, and refers them to the appropriate authorities. Essentially equivalent to Transport Canada's Emergency Response Guide.

Encyclopedia of Chemical Trademarks and Synonyms edited by H. Bennett, Chemical Publishing Co., New York, 1981. (QD 5 B35 1981)

Similar to the CRC Handbook but without descriptions of use or general characteristics. There is little overlap in the two dictionaries.

Exposure Criteria for Potentially Harmful Agents and Substances in Workplaces, Ontario Ministry of Labour, Occupational Health and Safety Division, Toronto, 1981. (File)

Gives the recommended values for time-weighted average exposure and short term exposure for about 500 substances.

Fire Protection Guide on Hazardous Materials, National Fire Protection Association, Boston, Mass., 8th ed., 1974. (T 55.3H3 N37 1984)

Outlines safe handling and fire handling of materials. Includes data such as: flash point index, properties of flammable limits, reactive hazards, general hazards, associated with chemicals.

HCIS Synonyms/Tradenames Index prepared by Dillon Consulting Engineers and Planners for the Ontario Ministry of the Environment, Hazardous Contaminants and Standards Branch, Toronto, 1982. (QD 5 D55 1982)

Lists synonyms and tradenames of contaminants under consideration by the Ministry (209 chemicals)

Handbook of Acute Toxicity of Chemicals and Aquatic Invertebrates by Waynon W. Johnson, and Mack T. Finley, U.S.

Government Printing Office, Washington, D.C., 1980, for the U.S. Fish and Wildlife Service (Resource publication 137). (LAB SH 177.C42 U53)

Lists the toxicity of substances to aquatic animal life. A few comments evaluating the data is sometimes available. Includes an index by chemical name.

Handbook of Environmental Data on Organic Chemicals by Karel Verschuren, Van Nostrand Reinhold, New York, 2nd ed., 1983. (TD 196.073 V47 1983)

Short entries provide mostly numerical data on the physical and chemical properties, air pollution, water pollution and biological effects of organic compounds.

Handbook of Hazardous Materials, Alliance of American Insurers, Shaunburg, Illinois, 2nd ed., 1983. (T 55.3H3 H36 1983)

Gives one paragraph on safe handling of an array of specific chemicals with an occupational bias.

Handbook of Poisoning by Robert Dreisbach, Lange Medical Publications, Los Altos, Calif., 10th ed., 1980. (RA 1215 D84 1980)

A concise summary of diagnosis and treatment of poisoning geared to the non-medical expert.

Handbook of Reactive Chemical Hazards by L. Bretherick, Butterworths, London, 2nd ed., 1979. (T 55.3H3 B74 1979)

Outlines probable or possible hazardous reactions due to the reaction between chemical substances.

Handbook of Toxic and Hazardous Chemicals by Marshall Sittig, Noyes Data, Park Ridge, N.J., 1981. (RA 566.22 S58 1981)

Includes information on about 600 chemicals which prominent U.S. institutions have listed. Entries vary greatly in length, with an emphasis on occupational health and safety.

Herbicide Handbook of the Weed Science Society of America, Weed Science Society of America, Champaign, Illinois, 4th ed., 1979. (SB 950.95 W43 1983)

Offers a summary of physical properties, toxicity and environmental fate for a wide range of herbicides used in the U.S.. Includes an index by tradename and common chemical name of active ingredients.

The Insecticide, Herbicide, Fungicide Quick Guide by B.G. Page and W.T. Thomson, Thomson Publications, Fresno, California, (Annual). (SB 950.95 P23 1982)

A thumb guide to pesticides recommended for use on particular crops. Access is provided by product or plant.

Material Safety Data Sheets compiled and edited by J. Merla Nielsen, General Electric, Schenectady, N.Y. 1980.

Data sheets on a variety of substances used by General Electric with an index by chemical name. Includes general occupational health and safety information.

McGraw-Hill Dictionary of Scientific and Chemical Terms, McGraw-Hill, New York, 2nd edition, 1979. (newer edition now available) (Q 123 M15)

A standard dictionary, useful place to start if nothing is known about a topic.

The Merck Index: An Encyclopedia of Chemicals and Drugs, Merck and Company, Rahway, New Jersey, 10th ed. 1983. (RS 356.M524 M524 1983)

A standard reference work, it includes general properties, trade marks, uses, pharmacological action and toxicity of nearly 10,000 compounds. Its emphasis is on medically important substances. Available on-line on CIS.

NIOSH/OSHA Pocket Guide to Chemical Hazards U.S. Government Printing Office, Washington, D.C., 1978. (RA 566.22 1978)

Gives the briefest of information on occupational health and safety of chemicals. Refer to NIOSH/OSHA Occupational Health Guidelines for more information.

The Pesticide Manual: A World Compendium edited by Charles R. Worthing, British Crop Council, Croydon, England, 7th ed. 1983. (SB 950.95 B86 1983)



Concise information on pesticides is given, such as: nomenclature, manufacture, properties, principle uses, toxicology, formulations, analytical methods, manufacturer.

Pesticides Guide: Registration, Classification and Application, J.J. Keller and Associates, Neenah, Wisconsin, supplement 2, 1980. (T 55.3H3 K43P 1980)

One of a family of guides by Keller Associates, it gives an overview of U.S. regulatory requirements and tolerances for pesticides. Periodically updated.

Pesticides Handbook - Entoma, Entomological Society of America, College Park, Maryland, (Annual). (SB 950.95 E58 1951)

Part one outlines the U.S. regulatory status and offer U.S. directory information. Part two lists alphabetically American commercial products, their uses, active ingredients and manufacturers.

Poisindex, Micromedex, Englewood, Colorado, 1974. (updated regularly).

A microfiche database giving information on symptoms, pharmacology, treatment and toxicity of 190,000 substances geared to dealing with cases of acute poisoning.

Poison Control Manual, Chipman Inc. Toronto. (Latest update November 1983). (RC 965.A5 L47 1981)

Contains the data sheet of its own products outlining active ingredient, toxicity, poisoning symptoms, and treatment.

Registry of Toxic Effects of Chemical Substances, U.S. Government Printing Office for the U.S. National Institute for Occupational Safety and Health (NIOSH), Washington, D.C., Annual. (RA 1193 R33 1982)

The largest compendium of health effects data in chemicals. The data is not reviewed. Reference to the source of the information is given. Aquatic toxicity and phytotoxicity is not included. Available on-line on Medlars and CIS.

Taber's Cyclopedic Medical Dictionary, F.A. Davis, Philadelphia, 1981. (R 121 T32 1981)

A small dictionary useful in defining medical terminology.

Toxic and Hazardous Industrial Chemicals Safety Manual for Handling and Disposal with Toxicity and Hazard Data, International Technical Information Institute, Tokyo, 1982.

Concise entries indicate toxicity and methods of handling, emergency response and disposal.

## II DIRECTORIES

1982 Canadian Trade Index, the Canadian Manufacturers' Association, Toronto, 1982. (T 12.5 C36)

A directory of manufacturers, and their products. Useful to get the manufacturers name when a tradename is known.

Citizen's Guide 1982, Environment Canada, Ottawa, 1982.  
(TD 173.5 C36 1982)

Lists sources of information and programs of the department.

Consulting Engineers of Ontario Directory, Consulting Engineers of Ontario, Toronto, 6th Revision, 1984. (T 12.5 C65 1984)

Revised regularly, lists consulting engineers practicing in Ontario.

Contact Toxics: A Guide to Specialists on Toxic Substances  
edited by Richard L. Penperthy, World Environment Center, New York, 1980. (RA 1230 P45)

Although a little dated, it enables to locate some experts on different aspects of ecotoxicology.

Data Base Directory, Knowledge Industry Publications, White Plains, N.Y., 1984. (Z 668.A1 D38 1984)

One of the most comprehensive lists of databases available including many not commercially available. An index lists the databases by subject areas.

Directory of Canadian Environmental Experts by the Canada Department of the Environment, Departmental Library, Supply and Services Canada, Hull, Quebec, 1984. (TD 173.5 C36 1984)

Directory of Canadian Publishers and Distributors, Canadian Publishers Association, Toronto. (semi annual)

Lists Canadian publishers and the Canadian agents for other publishers in Canada, most of whom are located in the Toronto area.



Directory of Federal and International Co-ordinating Groups on Toxic Substances by the United States Environmental Protection Agency, Office of Pesticides and Toxic Substances, NTIS, Springfield, Va., 3rd ed., 1983. (RA 1229. U55 1983)

Fraser's Canadian Trade Directory Fraser's, Toronto, 71st ed. 1984. (T 12.5 F86 1984)

A directory of manufacturers for industrial products arranged by product classification. The indexes allow to locate manufacturer's addresses, trade names, and distributor.

Government of Canada Telephone Directory, Supply and Services Canada, Hull, Quebec, (semi-annual).

The Directory of the Federal Government is divided into different parts for each region such as the Ontario Region and the National Capital Region.

Information U.S.A. by Mathew Lasko, Viking Press, New York, 1983.

This directory of American Federal and State Governments is geared for use by the public. It claims itself as a directory to free information. Access by areas of interest is available. (See also the United States Government Manual).

Scott's Directory of Ontario Manufacturers, Scott's Industrial Directories, Toronto, 13th ed., 1981. (newer edition available). (T 12.5 S36)

A directory of Ontario manufacturers arranged alphabetically. A geographical index and product type in Standard Industrial Classification code arrangement gives additional access.

The United States Government Manual, U.S. Government Printing Office, Washington, D.C., Annual.

This official directory lists all U.S. government departments and their chief contacts with telephone numbers.

U.S. Environmental Protection Agency Guidebook, Government Institute, Rockville, Md., 1983. (Annual). (TD 173.5 U58 1984)

Outlines the functions and different departments in the U.S.A. EPA and gives the phone number of key personnel.

### III OTHER REFERENCE WORKS

Annual Report on Carcinogens United States Public Health Service National Toxicology Program, Research Triangle Park, North Carolina, 3rd, 1983 (available from NTIS) (RC 261.A1 N37 1984)

Lists human carcinogens or suspected human carcinogens of importance in the United States, outlining the evidence for their carcinogenicity, indications to their use and occurrence, and regulatory action.

Canadian Environmental Law, Butterworths, Scarborough, Ontario, 1976. (updated periodically) (Main KC 3786 C37 Ref.)

A compilation of Canadian Federal and Provincial statutes including commentaries and digests of major environmental cases. The index gives some access by chemical names.

Canadian Legislation: Toxic Substances prepared by Woloschuk Associates for the Canadian Council of Resource and Environment Ministers, 1982. (KE 3606.H3 A58 W65 1982)

A compilation of Canadian Provincial and Federal legislation relating to toxic substances controlling manufacture, importation, transportation, storage and handling, use or sale, discharge to air, water or land, spills, occupational health and disposal.

Cassarett and Doull's Toxicology, the Basic Science of Poisons edited by John Doull, et al., Macmillan, New York, 2nd ed., 1980. (RA 1211 C296 1980)

The basic text on toxicology, it outlines the different areas of concern in the field. The sections on groups of chemicals outline the toxicity of major substances.

Chemical Hazard Information Profiles (CHIPs), United States Environmental Protection Agency Office of Pesticides and Toxic Substances, Washington, D.C., 1976-. (RA 566.22 U155 1980)

A preliminary review of environmentally and toxicologically important material for substances which are being considered for regulations under the Toxic Substances Control Act for which little information is available.

Clinical Toxicology of Agricultural Chemicals by Sheldon L. Wagner, Oregon State University Environmental Health Sciences Center, Cornwallis, Oregon, 1981. (RA 1270.P4 W34 1981)

Divided into two parts, part two gives a short synopsis on agricultural chemicals including uses, first aid, environmental fate, toxicological information and safe handling procedures.

Departmental Consolidation of the Food and Drugs Act and the Food and Drugs Regulations, Supply and Services Canada for the Department of National Health and Welfare, Hull, Quebec, 1981. (updated periodically). (KE 3696 F5 1953)

A source for maximum allowable contamination in food as prescribed by Health and Welfare Canada.

Drinking Water and Health by the National Research Council Assembly of Life Sciences Advisory Center on Toxicology Safe Drinking Water Committee, National Academy Press, Washington, D.C., 1977. (last update 1983). (RA 591 N38)

The major part of this book evaluates the health effects of chemical contaminants in drinking water suggesting, if possible, maximum concentrations in water. New volumes update the previous ones by providing additional information of chemicals already considered, and including previously unconsidered substances.

Environmental Regulation Handbook Environment Information Center, New York, 1972. (monthly update)

This is a compilation of U.S. Legislation reprinted from the Federal Register. The index provides some access by chemicals.

IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans, World Health Organization, Geneva, 1972: CRC 268.6 I58 1972)

Prepared by one of the world authorities on cancer, (the International Agency for Research on Cancer), the monographs evaluate the evidence of carcinogenicity for chemicals of importance to humans. Supplement 3 gives an index to the substances covered in volumes 1-26 of the series. 32 volumes have been published to date.

Information Dossiers on Chemicals by H.S. Menon, unpublished, 1981-82, prepared for the Ontario Ministry of the Environment, Air Resources Branch, Atmospheric Contaminants and Research Planning Unit, Toronto. (RA 566.22 M45)

From the review of the literature, it presents information on the properties, uses, manufacture, environmental fate, sampling and analytical procedures, and health effects of selected chemicals, with special reference to air pollution.

International Regulatory Aspects for Pesticide Chemicals, v:1 Toxicity Profiles by G. Vettorazza, CRC Press, Boca Raton, Florida, 1979.

One hundred and forty three pesticides are covered in this text. The information includes acceptable daily intakes and a list of WHO/FAO documents on residues in food.

Kirk-Othmer Encyclopedia of Chemical Technology John Wiley, New York, 3rd ed., 1978-1984.

This encyclopedia is useful for an overview of manufacturing processes. Half of the entries deal with chemical substances, giving a general overview, properties, manufacturing processes and uses.

National Toxicology Program Chemical Registry Handbook by the United States National Library of Medicine, Specialized Information Services Division, U.S. Government Printing Offices, Washington, D.C., 1981. (TD 173.5 U56 1981)

Prepared for the National Toxicology Program, it lists alphabetically by name chemicals considered for testing between 1978 and 1980. Each entry gives CAS registry number, synonyms, structure, action taken by NTP, information sources and synonyms.

National Toxicology Program Technical Report by the United States Public Health Service National Toxicology Program, U.S. Government Printing Office, Washington, D.C., on going. (RC 268.65 N35)

Starting in 1977, originally under the National Cancer Institute, reports of 2-year rat and mouse carcinogenicity bioassays undertaken by the National Toxicology Program have been published in this series. Reports are reviewed before release. Over two hundred chemicals have been tested.

Occupational Health Guidelines for Chemical Hazards edited by Frank W. Mackinson, et al., U.S. Government Printing Office, Washington, D.C. 1981, for the U.S. National Institute for Occupational Safety and Health and the U.S. Occupational Safety and Health Administration (DHHS (NIOSH) 81-123) (RA 566.22 M33 1981)

A summary of factors related to the health and safety of chemical agents. Includes OSHA standards applicable in 1980, TLV's by the ACGIH, protective equipment and safe handling.

Patty's Industrial Hygiene and Toxicology edited by George D. Layton, et al., John Wiley, New York, 3rd ed., 1978-1982. (RC 967 P37)

Volume 2A, B, C offers toxicological data for a wide range of chemicals.

Pesticide Residues in Food; Evaluations, Food and Agriculture Organization of the United Nations, Rome, annual. (RA 601 F66 1966)

A thorough evaluation of toxicological and environmental data on agricultural chemicals. Different chemicals are evaluated each year, an index for substances evaluated from 1957-1978 is available. Information includes acceptable daily intake.

Pesticide Users Guide, Colorado State University Cooperative Extension Service, Boulder, Colo.

Serves as an introductory guide to safe handling and the toxicity of pesticides.

Pesticides Studied in Man by Wayland J. Hayes, William & Wilkins, Baltimore, 1982. (RA 1270.P4 H37 1982)

Outlines the knowledge on the toxicology of pesticides with emphasis on the effects to humans.

The Pesticide Chemical News Guide, Food Chemical News Inc.  
Washington, D.C., 1981. (RA 601 P38 1981)

Lists U.S. Environmental Protection Agency tolerances and exemptions for pesticides on food. Access is given by crop or chemical. Periodical updates are available.

Poison Control Manual, Chipman Inc. Stoney Creek, Ontario.  
(latest update November 1983). (RC 965.A5 L47 1981)

Provides poisoning information on products distributed by Chipman. Access is by product name.

Suspect Chemical Sourcebook prepared by Springborn Regulatory Services, Roytech Publications, Burlingame, Calif., 3rd ed., 1983. (TD 173.5 S77 1983)

This book allows to find on which list certain chemicals have been included. Seventeen lists from U.S. regulatory agencies and international organisations are considered.

Toxic Substances Control Act Chemical Substance Inventory by the United States Environmental Protection Agency Office of Toxic Substances, U.S. Government Printing Office, Washington, D.C. 1979 (supplement 2, 1982). (TD 173.5 U55 1979)

Lists all chemicals manufactured or imported to the United States in quantities of 1000 lb/mo. or more as required by TSCA. Can be used to locate CAS numbers and manufacturers. The inventory is available on-line.

Toxic Substances Source Book, Environmental Information Center, New York, 1978-1980.

Only two volumes of this book planned as an annual review have been published. They are useful for an overview of the issues around toxic substances.

Toxicology of Pesticides by Wayland J. Hayes, Jr., Williams & Wilkins, Baltimore, Md., 1975.

The standard textbook on the toxicology of pesticides, it provides general principles of toxic action management of poisoning by pesticides.



#### IV FACTUAL DATA BASES

The format in this section is as follows:

Name of database (Service or vendor from which is available)  
Related databases: any other data base which covers essentially  
the same type of information.  
A short description of the content of the file  
Comments: any additional information outlining special assets  
or limitations of the file.

##### CESARS

Related Databases: OHMTADS, TDB, Hazardline

CESARS (Chemical Evaluation Search and Retrieval System) provides a concise review of the information available necessary for evaluation of environmental and health impacts of selected chemicals divided into 185 data fields (about 200 substances)

Comments: Some entries are very long. Some of these have already been printed and are on file. Can be searched and retrieved by fields.

##### CLAIMS (Dialog)

Related Databases: WPI, USPA

A family of databases covering U.S. patents. The CLAIMS Compound Registry is a dictionary file of compound names that is used to help access to the CLAIMS central file which has chemically related patents.

##### CRIS/USDA (Dialog)

Related Databases: SSIE, ICAR, IEC

A directory of research supported by the U.S. Department of Agriculture.

##### CTCP

The on-line version of Gosselin's Chemical Toxicology of Commercial Products it gives the composition of commercially available products and toxicity information on about 1500 substances.

Comments: Can be searched by CAS registry number, tradenames, and use.

### Chemdex (Orbit)

Related Databases: Chemname, Chemsearch, SANSS, DARC, Chemline

A nomenclature file for chemicals as produced by the Chemical Abstracts Service. It contains registry number, molecular formulae, synonyms and ring system information for 3,000,000 substances.

Comments: A good source of CAS registry numbers. Unfortunately the file is divided into 3 sections, meaning that the search sometimes needs to be repeated. Once retrieved, CAS registry numbers can be used to search in CAS files using the select and crossfile features.

### Chemical Exposure (Dialog)

Related Databases:

Prepared by the Chemical Effect Information Centre, Oaken Ridge National Laboratory, U.S. Dept. of Energy, this file includes published studies on levels of chemicals found in human tissue and food animals. Chemical properties of substances are also included.

Comments: Can be accessed by CAS registry numbers.

### Chemline (Medlars)

Related Databases: Chemdex, Chemname, SANSS, DARC, Chemsearch

Essentially equivalent to Chemdex and Chemname as described above but limited to substances in Medlars. (500,000 substances)

Comments: Useful to assist chemical name searches on Medlars and increase retrieval.

### Chemname (Dialog)

Related Databases: Chemdex, Chemsearch, SANSS, DARC, Chemline

Essentially identical to CHEMDEX described above (1,300,000 chemicals)

Comments: A good source of CAS registry number. CAS numbers can then be used to access CAS files, Medline, and other files which include CAS numbers.



Chemsearch (Dialog)

Related Databases: Chemname, Chemdex, SANSS, DARC, Chemline

Includes the most recently added names to the CAS registry. A companion file to Chemname.

DARC

Related Databases: Chemname, Chemdex, SANSS, Chemsearch, Chemline

Using a coded description of a molecular structure or substance obtain the CAS number(s) of all the substances having the described structure or substructure among the 5 million compounds.

Comments: Similar to the structure search capability of SANSS but for a large number of substances. Substructure searches allow for obtaining CAS numbers for groups of compounds.

ECDIN (DC Host Centre)

Related Databases: TSCA, TSCAPP, OHMTADS

ECDIN (European Communities Data Bank for Environmental Chemicals) contains data on over 60,000 compounds. Information included are synonyms, structure, manufacturing processes, uses, production and consumption statistics, occupational and environmental health data.

Comments: Some chemicals have only scant information. Not presently subscribed to by Hazardous Contaminants and Standards Branch.

Harzardline (Occupational Health Services)

Related Databases: TDB, CESARS, OHMTHAD~~OS~~<sup>S</sup>

Outlines chemical and physical properties of industrial chemicals safety precautions, and references U.S. regulatory requirements.

ICAR (Can/OLE)

Related Databases: CRIS/USDA, IEC

An inventory of Canadian agricultural research.

IEC (Can/OLE)

Related Databases: CRIS/USDA ICAR

A directory of research in university supported by the Government of Canada.

OHMTADS (CIS)

Related databases: CESARS, TDB, Hazardline

OHMTADS (Oil and Hazardous Materials Technical Assistance Data System) has been developed to assist in the handling of spills. Includes physical, chemical, biological, toxicological and commercial data with an emphasis on effects in water quality. (about 1200 substances).

Comments: Also available on microfiche, retrievable by common name or CAS registry number.

NPIRS (Purdue University)

Related Databases: Product Data Base

Provides up-to-date information about pesticides registered by the U.S. government and some states.

RTECS (CIS, Medlars)

Contains toxicity data on over 50,000 potentially toxic chemicals. Available on microfiche and in printer copy.

Comments: Can be searched by CAS registry number. All data is referenced to source.

SANSS (CIS)

Related Databases: Chemname, Chemdex, Chemsearch, DARC, Chemline

The Structure and Nomenclature Search System allows searches by chemical structure or substructure, chemical name, trade name, molecular formula, molecular weight, and chemical fragments.

The chemical abstract number, chemical name and synonyms, molecular formula, chemical structure, and list of other sources of information is available for most substances. (300,000 chemicals).

Comments: A good source of chemical abstracts number, although not as extensive as Chemname or Chemdex. It serves as a useful access point to other databases on CIS. A bit more difficult to access than the two above files.

#### PRIS (Agriculture Canada)

Related Databases: PDB

The Pesticides Research Information System is prepared by Agriculture Canada. It provides information on pesticides and biocontrol agents from the time they are introduced in Canada for research purposes to the time they are registered for specific uses.

#### Product Data Base (Comshare)

Related Databases: NPIRS

Produced by Comshare for Agriculture Canada this database lists the pesticides registered for use under the Pest Control Products Act. Type of information includes registrant, product name, use and application codes.

Comments: Comshare has also produced a database for the Ontario Ministry of the Environment which includes the status under provincial legislation.

#### TDB (Medlars)

Related databases: CESARS, OHMTADS, Hazardline

A review of toxicological data on about 4000 substances of major commercial importance or of extreme toxicity. TDB (Toxicology Data Base) includes pharmacological, toxicological, environmental, occupational, manufacturing, use information, and chemical and physical properties.

Comments:

#### TSCA (Orbit, Dialog)

Related Databases: TSCAPP, ECDIN

The on-line version of the Toxic Substances Control Act inventory, includes CAS numbers, molecular formulae, chemical names, manufacturers and non-confidential production data.

Comments: The TSCA file on Dialog does not contain the manufacturers nor the supplement to the inventory.

TSCAPP (CIS)

Related Databases: TSCA, ECDIN

The TSCA Plant and Production contains non-confidential information reported to the U.S. Environmental Protection Agency on production volume, company name and address and plant site. (50,000+ substances)

Comments: Does not include pesticides or dumps. Only large volume production as defined by TSCA is included.

USPA (Orbit)

Related Databases: WPI, CLAIMS

One of a family of databases covering U.S. patents.

WPI (Orbit)

Related Databases: Claims, USPA

The World Patent Index (WPI) covers the patents of 24 countries.

Comments: Need to subscribe to it specifically.

## V BIBLIOGRAPHIC DATA BASES

The format in this section is as follows:

Name of database (Service or vendor from which is available)

Related databases: any other data base which covers essentially the same type of information.

A short description of the content of the file (years of coverage)

Comments: any additional information outlining special assets on limitations of the file.

### ✓ Agricola (Dialog)

This file is the on-line catalogue of the U.S. National Agriculture Library. (1970-)

Comments: A source of books and reports as well as journal articles. Items are selectively abstracted.

### ✓ Apilit (Orbit)

Prepared by the American Petroleum Institute it covers the literature of the petroleum and petrochemical industry (1964-)

Comments: Restricted access only to non-subscribers.

### Aqualine (Dialog)

This database is produced by the Water Research Centre (U.K.) and covers the water resources management literature.

Comments: Includes some water standards and other difficult to trace materials.

### ✓ Biosis (Dialog, CAN/OLE)

The online version of Biological Abstracts, covers the research literature on the life sciences 1964-present.

Comments: The file includes abstracts as of 1976. The file is divided into different years of coverage. The file is called BA on CAN/OLE.

### CAS (Orbit, CAN/OLE, Dialog)

The on-line version of chemical abstracts, 1967 to present. Due to the size of the file, they are subdivided. Latest file covers 1982 to present.

Comments: Records are accessible using CAS registry numbers. The first choice to search for information on a specific chemical. This file is called CA Search on Dialog.

✓ CODOC (Can/Ole)

CODOC, or Government Documents, records the publication of the Canadian Government.

✓ CRGS (Dialog)

The Chemical Regulation and Guidelines System refers to the Code of Federal Regulation and amendments as they appear in the Federal Register (June 1982-)

Comments: Access is provided by CAS registry number and chemical name. Limitation by the type of document.

✓ ELIAS (Can/Ole)

Environmental Libraries Automated System. The union catalogue of Environment Canada's libraries.

✓ Enviroline (Orbit, Dialog)

Produced by the Environmental Information Center, is the online version of Environment Abstracts.

Comments: Abstracts are available on-line. Good for environmental policy, law and socio-economic discussion of pollution (1971-)

✓ Environmental Bibliography (Dialog)

The area of coverage includes human ecology, resource management, nutrition and health. (1973-)

Comments: A relatively few journals are indexed.

✓ Exerpta Medica (Dialog)

Covers the medical and pharmaceutical literature. Includes environmental health, pollution control.

Comments: Abstracts are available on-line. There is a long delay between publication and appearance of a record in Excerpta Medica.

FRSS (CIS)

Related Databases: Federal Register, CRGS

The Federal Register Search System is a selected list of references from the Federal Register which have a chemical bearing. (1977-)

Comments: Access is provided by CAS number for most items. There is often a large retrieval and the search has to be narrowed to include only rule or proposed rules or other limitors.

Federal Register Abstracts (Dialog, Orbit)

Related Databases: FRSS, CRGS

The table of contents of the Federal Register with full title  
Food Science and Technology Abstracts (Orbit, Dialog)

Related files: Agricola

From a survey of over 1200 journals it indexes material on all aspects of food production and food processing (1969-)

Comments: Abstracts are included.

GPO Monthly Catalog (Orbit Dialog)

Related Databases: NTIS

The machine readable equivalent of the Monthly Catalog of United States Government Publications, records items published by the U.S. Government Printing Office.

Comments: Not as strong in the science and technology field as NTIS.

Life Sciences Collection (Dialog)

General database on the biological sciences, including ecology and toxicology. (1978-)

Medline (Medlars, Dialog)

This major source to medical literature is produced by the U.S. National Library of Medicine.

Comments: Abstracts are included when available.

NTIS (Dialog, Orbit, CAN/OLE)

Related Databases: GPO

Many U.S. government publications are redistributed by the National Technical Information Service. This database is a record of all publications which are distributed by it since 1970.

Comments: A good source of U.S. government documents, however, some are only given to NTIS sometime after publication. Another source of U.S. government publications are those from the U.S. Government Printing Office. Abstracts are included.

Paperchem (Dialog, Orbit)

Indexes and abstracts the scientific and technical literature relating to the pulp and paper industry. The on-line equivalent of Abstracts Bulletins of the Institute of Paper Chemistry. (1968-)

Pollution Abstracts (Dialog)

Comments: Better for general discussion or environmental health than for retrieval of material on specific substances.

SciSearch (Dialog)

The on-line version of the Science Citation Index.

Comments: Although a term index is included, this file is best used to locate papers that have cited a certain author.



Surface Coating Abstracts (Dialog)

Surface coating referred to in this database include, pigments and dyestuffs, solvent, resins, plasticizers, inks, fire retardants. (1976-)

Comments: Includes some pollution and environmental health information.

TITUS

Related Databases: Textile Technology Digest; World Textiles

Includes environmental protection pollution control and environmental health of the textile industry (1967-)

Comments: A source of information on dyes and the dyeing process.

Textile Technology Digest (Dialog)

Related Databases: TITUS, World Textiles

Provides access to the literature of interest to the textile industry (1978-)

Comments: A source of information on dyes and the dyeing process. Some pollution control information is available.

Waternet (Dialog)

Provides an index to the publication of the American Water Works Association, its Research Foundation and selected authorities.

Comments: Has a very narrow scope.

Water Resources Abstracts (Orbit, Dialog)

Produced by the U.S. Dept. of Interior Office of Water Research and Technology, covers all aspect of water resources management. (1968-)

Comments: Abstracts are included. Selected Water Resources Abstracts on Orbit.

World Textiles (Dialog)

Related Databases: TITUS, Textile Technology Digest

The machine readable version of World Textile Abstracts, include information on pollution, safety and health hazards.

World Aluminum Abstracts (Dialog)

All aspects of aluminum and aluminum processing. (1968-)

## VI CURRENT AWARENESS

Listed below are journals subscribed to by the Hazardous Contaminants and Standards Branch or the Main/Lab Libraries of the Ministry which regularly contain information of interest.

Acta pharmacologica et toxicologica  
Aquatic toxicology  
Archives of environmental contamination and toxicology  
Archives of environmental health  
Archives of toxicology  
Bulletin of environmental contamination and toxicology  
CELA newsletter  
Chemosphere  
Drug and chemical toxicology  
Ecotoxicology and environmental safety  
Environmental health  
Environmental mutagenesis  
Environmental research  
Environmental science and technology  
Environmental toxicology and chemistry  
Food and chemical toxicology  
Fundamental and applied toxicology  
Journal of chemical ecology  
Journal of environmental science and health  
Journal of the National Cancer Institute  
Journal of toxicology and environmental health  
Probe post  
Regulatory toxicology and pharmacology  
Risk assessment abstracts  
Scandinavian journal of work environment, and health  
Science of the total environment  
Toxicological and environmental chemistry reviews  
Toxicology and applied pharmacology  
Toxicology  
Toxic substances journal

Listed below are newsletters which are a way of keeping aware of developments and happenings of interest.

Air/water pollution report  
Canada gazette  
Chemical regulation reporter  
Eco/log week  
Environmental health letter  
Environment reporter  
Federal register  
Hazardous materials intelligence report  
Hazardous waste news  
IRPTC bulletin  
Inside EPA  
NTP technical bulletin  
Ontario gazette  
Research and development bulletin (Supply and Services Canada)  
TSCA chemicals-in-progress bulletin  
Toxic material news

## **VII OTHER SOURCES**

### **CISTI**

National Research Council  
Ottawa, Ontario  
K1A 0S2

(613) 993-2013 reference

(613) 993-1585 inter-library loans

CISTI, Canada Institute for Scientific and Technical Information has a mandate to assist in fulfilling the information needs of the Canadian scientific and technical community. It serves as a source of last resort when the search for information has been unsuccessful elsewhere. Some of their services are available on a fee basis.

### **Canadian Centre for Occupational Health and Safety**

250 Main St. East  
Hamilton, Ontario  
L8N 1M6

(416) 523-2981

Will reply to requests for information on matters of health and safety of chemicals especially in the work place. As this usually entails a literature review there is often a delay of several weeks to obtain replies.

### **Canadian Public Health Association**

1335 Carling Avenue No. 210  
Ottawa, Ontario  
K12 8N8

(613) 725-3769

The C.P.H.A. is the distributor for World Health Organization (WHO) publications including those of the International Agency for Research on Cancer (IARC)

### **Chemical Manufacturers Association**

2501 M Street N.W.  
Washington, D.C.  
20037

Chemecology, a free newsletter, presents the industry's view on environmental aspects of chemicals. It will sometimes reference reports that are available.

**The Conservation Foundation**  
1717 Massachusetts Ave. N.W.  
Washington, D.C.  
20036

One of the largest public interest groups in the U.S. They regularly publish books.

Consumer and Corporate Affairs Canada  
Ontario Region  
UFFI Program  
**4900 Yonge St.**  
Toronto, Ontario  
M2N 6A6

(416) 224-3779

Refer enquiries on ureaformaldehyde insulation to this office.

Consumer and Corporate Affairs Canada  
**Toronto District Office**  
Product Safety  
1859 Leslie St.  
Don Mills, Ontario  
M3B 2M1

(416) 447-5183

Will assist to answer requests on the health effects of certain chemicals in consumer products.

Great Britain  
Dept. of Employment  
**Health and Safety Executive**  
Taxton House  
Tothill Street SW1  
London, England

Has produced a set of toxicity reviews on chemical hazards.

Health and Welfare Canada  
**Health Protection Branch**  
2301 Midland Avenue  
Scarborough, Ontario

(416) 291-4231

The Drugs Division and Environmental Health Inspection will answer queries on allowable limits of substances in food as by regulation or working guidelines.

**IRPTC**

Dr. P. Toft  
National Correspondent  
Environmental Health Centre  
Tunney's Pasture  
Ottawa, Ontario  
K1A 0L2

IRPTC, the International Register of Potentially Toxic Chemicals, is an international effort under the United Nations Environment Programme (UNEP) to collect and compile an information database on chemicals. As all information requests must be channelled through the national correspondent, and there is only a small staff to handle the information system, response time to requests is slow, however, it is one of the best sources for non-American Information.

**Metropolitan Toronto Library**

789 Yonge Street  
Toronto, Ontario

Provides a good reference service for questions needing short answers available from handbooks or directories. As a guide, some of the departments and topics covered are noted below:

General Reference (928-5211): for general directory information, questions of a general nature.

Bibliographic Centre (928-5182): for information on a particular book, report, or publisher.

Science and Technology (928-5234): for directory information and other information in the scientific field.

Business (928-5256): for information on manufacturers and some statistics.

Social Sciences (928-5246): for government directory information, and many other large institutions.

**National Academy of Sciences**

2101 Constitution Ave. N.W.  
Washington, D.C.  
20418

Many of the studies of the NAS are available through the National Academy Press. The News Report highlights the activities undertaken by the Academy and will announce reports that are available.

National Research Council of Canada  
**Associate Committee on Scientific Criteria for  
Environmental Quality**  
Ottawa, Ontario  
K1A 0R6

To be disbanded, this group has published review documents on topics of environmental interest. (yellow and blue covers)  
For information on publications (613) 993-2054.

**Ontario Ministry of Labour**  
Library  
400 University Avenue, 10th floor  
Toronto, Ontario

The library produces a monthly acquisition list. The Library Bulletin, part A Occupational Health and Safety is a good way of becoming aware of sources of information.

**Ontario Ministry of the Environment**  
Main Library  
135 St. Clair Avenue West  
Toronto, Ontario (416) 965-7978

and

**Lab Library**  
Resources Road  
Rexdale, Ontario (416) 248-3041

The libraries have a collection of material covering all aspects of environmental matters including large numbers of journals which can be borrowed by Ministry staff. The Lab Library will perform literature searches on topics of interest using their on-line access to computerized databases.

**Ontario Ministry of the Environment**  
**Hazardous Contaminants & Standards Branch**  
40 St. Clair Avenue West, 7th Floor  
Toronto, Ontario (416) 965-2401

The Branch has a specialized collection emphasizing the effects of toxic chemicals on humans and the environment. Staff members are available to answer specific questions in this area of concern.



**PACE**

130 Albert St., No. 40  
Ottawa, Ontario  
K1P 5G4

(613) 236-9122

PACE, Petroleum Association for the Conservation of the Canadian Environment, has a technical report series.

U.S. Dept. of Health and Human Services  
**National Institute for Occupational Safety and Health**  
3676 Columbia Parkway  
Cincinnati, Ohio  
45226

Publishes the well known series "Criteria for a recommended standard" as well as other items of interest on the health aspects of chemicals.

U.S. Dept. of Health and Human Services  
**National Toxicology Program**  
Public Information Office  
P.O. Box 12333  
Research Triangle Park, North Carolina  
27709

An important series of reports on carcinogenesis bioassays is available through them.

U.S. Environmental Protection Agency  
**Criteria and Standards Division (WH 585)**  
401 M St. S.W.  
Washington, D.C.  
20460

U.S. Environmental Protection Agency  
**Office of Research and Development**  
Publications  
Cincinnati, Ohio  
45268

Is a source of free EPA publications including such series as health assessment documents. They also provide project summaries of reports available through NTIS.

U.S. Environmental Protection Agency  
**TSCA Assistance Office**  
401 M St. S.W.  
Washington, D.C.  
20460

(202) 554-1404

This office is a clearinghouse of information on the Toxic Substances Control Act and activities surrounding it. They periodically release "Health Advisories", "Chemical Advisories", and Chemical Hazard Information Profiles (CHIPs)

## APPENDIX I

### SOME GUIDES TO THE LITERATURE

Chemical Publications by M.G. Mellon, McGraw-Hill, New York, 1982

How to Find Chemical Information by Robert E. Maizell, John Wiley, New York, 1979.

Information Resources in Toxicology by Philip Wexler, Elsevier North-Holland, New York, 1982

The Literature Matrix of Chemistry by Herman Skolvik, John Wiley, New York, 1982

"Toxicological Information" by Henry M. Kissman and Philip Wexler, in Annual Review of Information Science and Technology 18 (1983): 185-230

Use of Chemical Literature edited by R.T. Bottle, Butterworths, London, 3rd ed., 1979.

**Z**  
**5862.2**  
**.H3**  
**M34**  
**1984**

Information sources on  
hazardous contaminants /  
Macfarlane, R.

6489